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HARPER'S WEEKLY

SATURDAY
JANUARY 10
1903

Edited by GEORGE HARVEY

New York's Transportation Problem

LORD CURZON
The Man and His Work

Washington Society

Outlook for Tariff Legislation During the Short Session

Recent Light on Röntgen Rays

AMERICANS OF TO-MORROW

THIS WEEK

ARTHUR T. HADLEY

NEXT WEEK

ALBERT J. BEVERIDGE

Sixteen Pages of Comment on Politics, Literature, and Life

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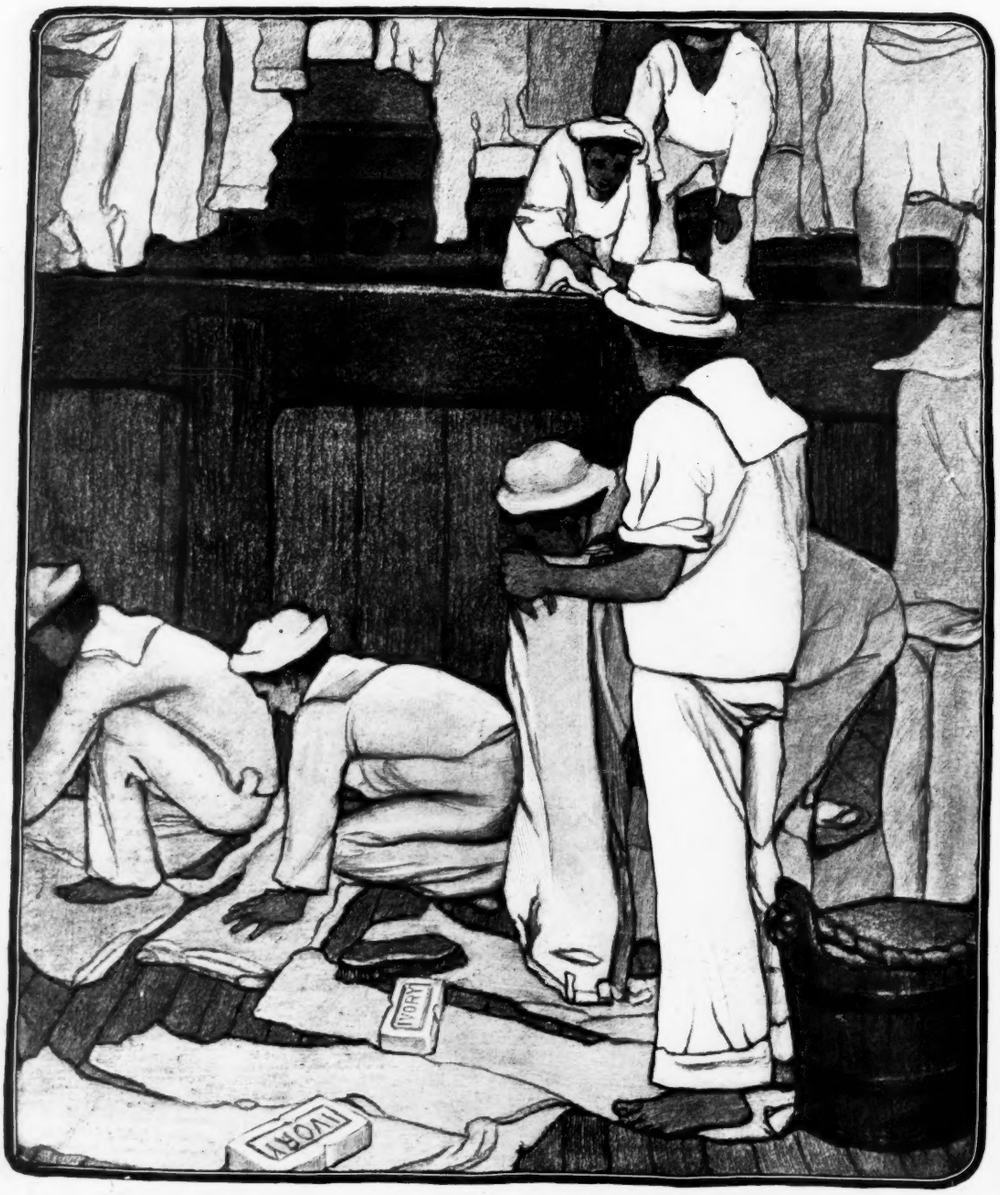

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HARPER'S WEEKLY

VOL. XLVII. *New York, Saturday, January 10, 1903—Illustrated Section* NO. 2403

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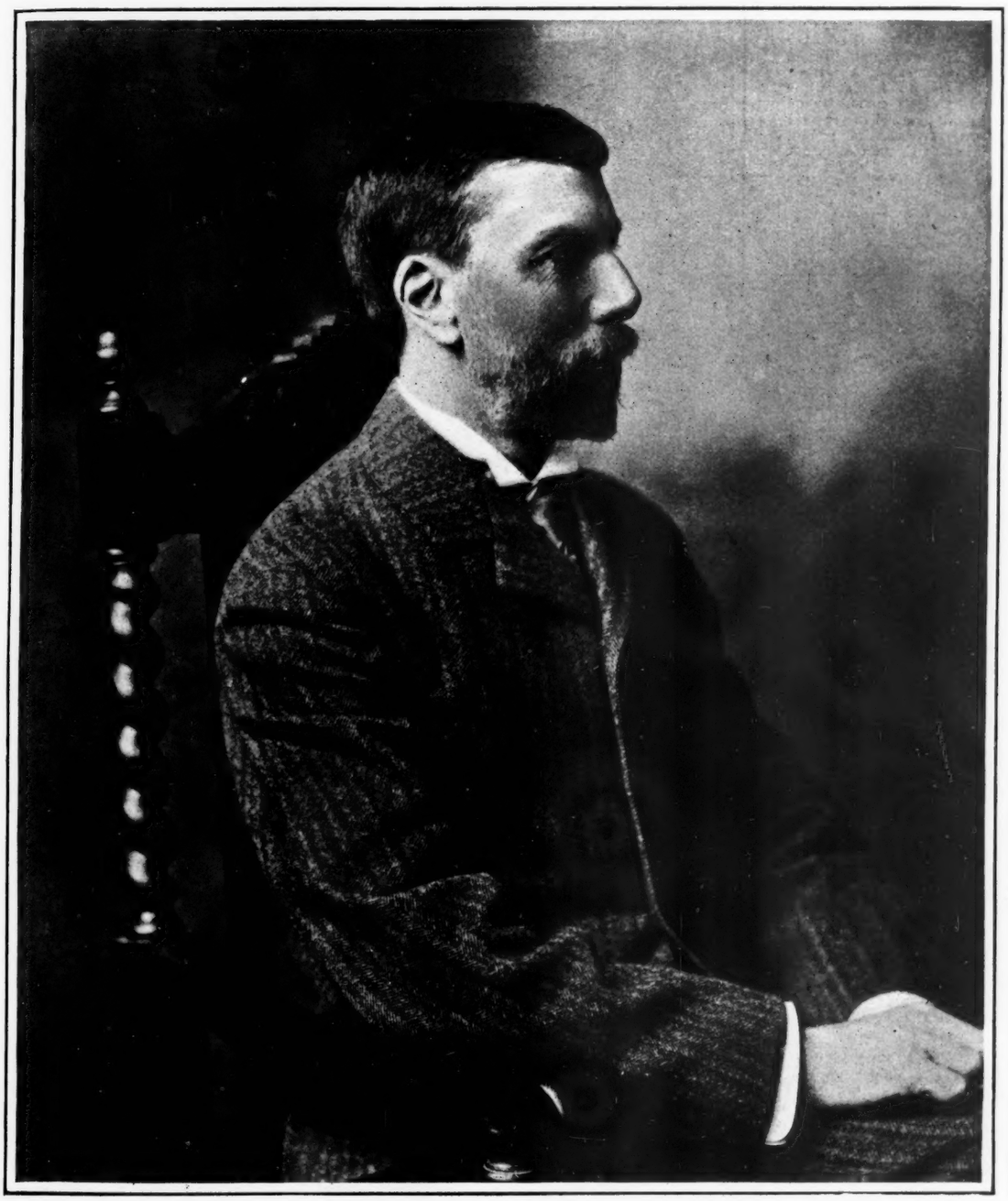


AMERICANS OF TO-MORROW

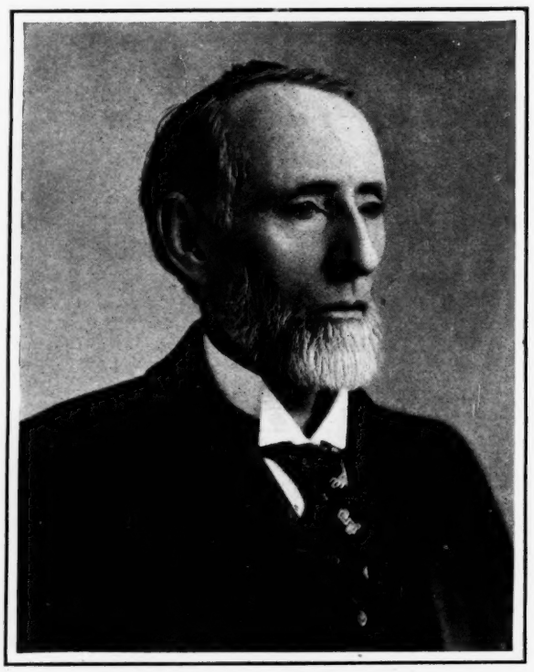
XXII.—ARTHUR TWINING HADLEY, *AET. 46*

See page 58—Editorial Section

The Outlook for Tariff Legislation

THE anomalous state in which proposed tariff legislation finds itself in the closing days of the Fifty-seventh Congress is that but one of the tariff bills under consideration (that providing for the reduction of the Philippine tariff) has originated in the House, where all revenue measures have their constitutional initiation, and that not even one of these is in the hands of the Senate Committee to which revenue bills in that body are normally referred. Such legislation has come in "by some other door," cloaked in the language of treaties, and asking the consideration accorded to "foreign relations." The result is that Senator Cullom's committee has the Cuban, Newfoundland, French, and all other reciprocal tariff treaties in its hands, while Senator Lodge's committee on the Philippines has in its keeping the remaining bill. The Finance Committee is out of tariff work. This is the present situation. No other tariff legislation has put its head above the horizon.

As to the outlook, it is possible to speak with almost as great definiteness. First, the proposed reciprocity with Newfoundland will not be approved. The interests of twenty or thirty thousand fishermen off the coast of Maine and Massachusetts protest against it, though some of the great packers of the United States are for it. Also, Senators Frye and Lodge are members of this committee. Second, the French treaty and the whole tribe of "Kasson treaties" have no chance of confirmation. Senator Aldrich, chairman of the Finance Committee, is not disposed to let reciprocity rob his committee of its revenue control and legislative prerogative, and there are, moreover, devious interests opposed to the measures themselves. With these treaties out of the way, there are but two propositions left: the one embodied in the Cuban reciprocity treaty; the other providing for the reduction of the duties on imports from the Philippines to twenty-five per cent. of the Dingley rates (the present rates being seventy-five per cent.).

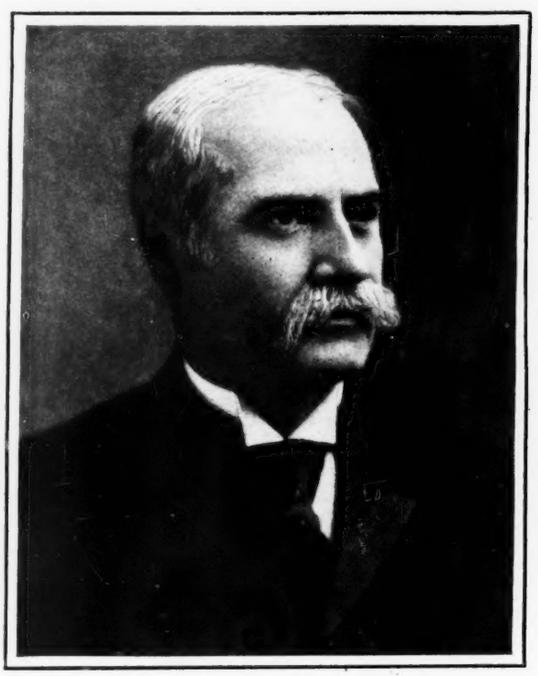


Senator Shelby M. Cullom, of Illinois
Chairman of Committee on Foreign Relations. The Cuban Reciprocity bill has been referred to this committee

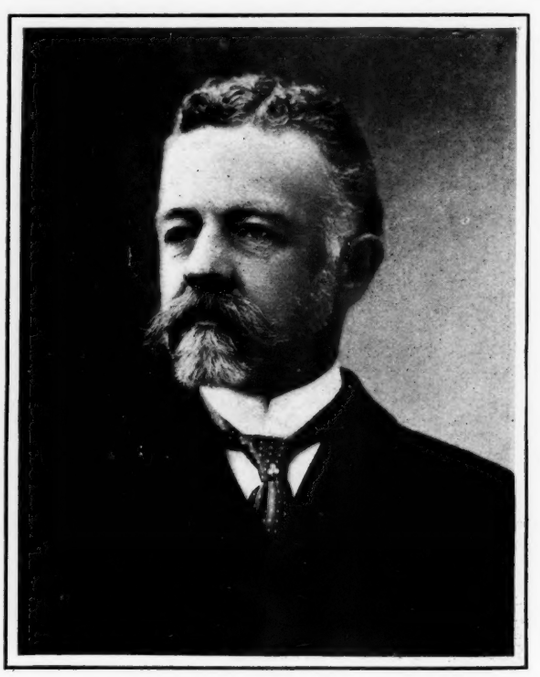
The Cuban treaty which was submitted to the Senate just before its recess has now good promise of confirmation, if it can be brought to a vote. This good prospect has perhaps some relation to the hope on the part of its enemies of being able to hold it up in the House; for it is anticipated that the President, in event of the Senate's confirmation, will ask for legislation by the House in harmony with the treaty's provisions before giving it effect. Meanwhile, the beet-sugar interests, soon to hold a convention, are to deliberate as to whether they can allow the proposed reduction, and meanwhile, also, the people of the country grow impatient of the Senate's tardiness in meeting the obligations under which Cuba's rightful expectations have put it.

The Philippine bill has, it would seem, a precarious journey ahead of it, with fairly good prospects of reaching its destination. Here again the sugar interests threaten to prevent in the Senate as great a decrease as the House has voted. The fifty per cent. reduction seems to be conceded. The struggle will be over the remaining twenty-five per cent., and the issue cannot now be predicted.

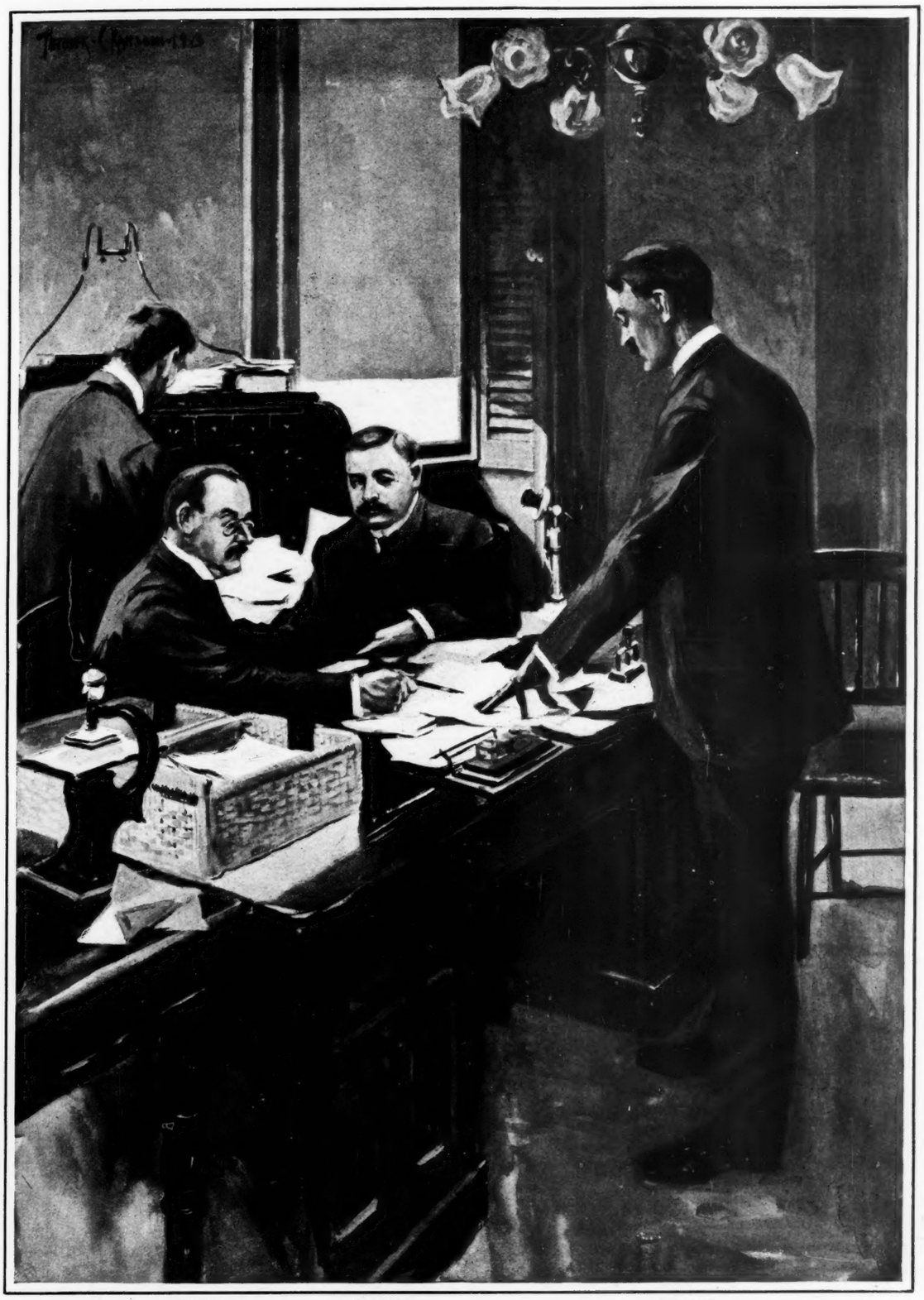
This is the meagre result that may be expected in tariff legislation this session. Even the President's slight recommendations appear to be unheeded.



Senator Nelson W. Aldrich, of Rhode Island
Chairman of Finance Committee. It is held that the Cuban and Philippine bills, on account of their revenue features, should be referred to this committee



Senator Henry Cabot Lodge, of Massachusetts
Chairman of Committee on the Philippines, that has the bill for the reduction of the Philippine tariff in charge



Major Ebstein General Greene Captain Piper

THE MILITARY HEADS OF NEW YORK'S POLICE FORCE

The Police Commission of New York on January 1, for the first time in the history of the city, became a military organization. General Francis V. Greene, appointed by Mayor Low, is an experienced military officer. His assistants, Major Ebstein and Captain Piper, have both seen long military service, and the attempt to put the police force on a strict military basis will be watched with great interest throughout the country

The Academy Exhibition

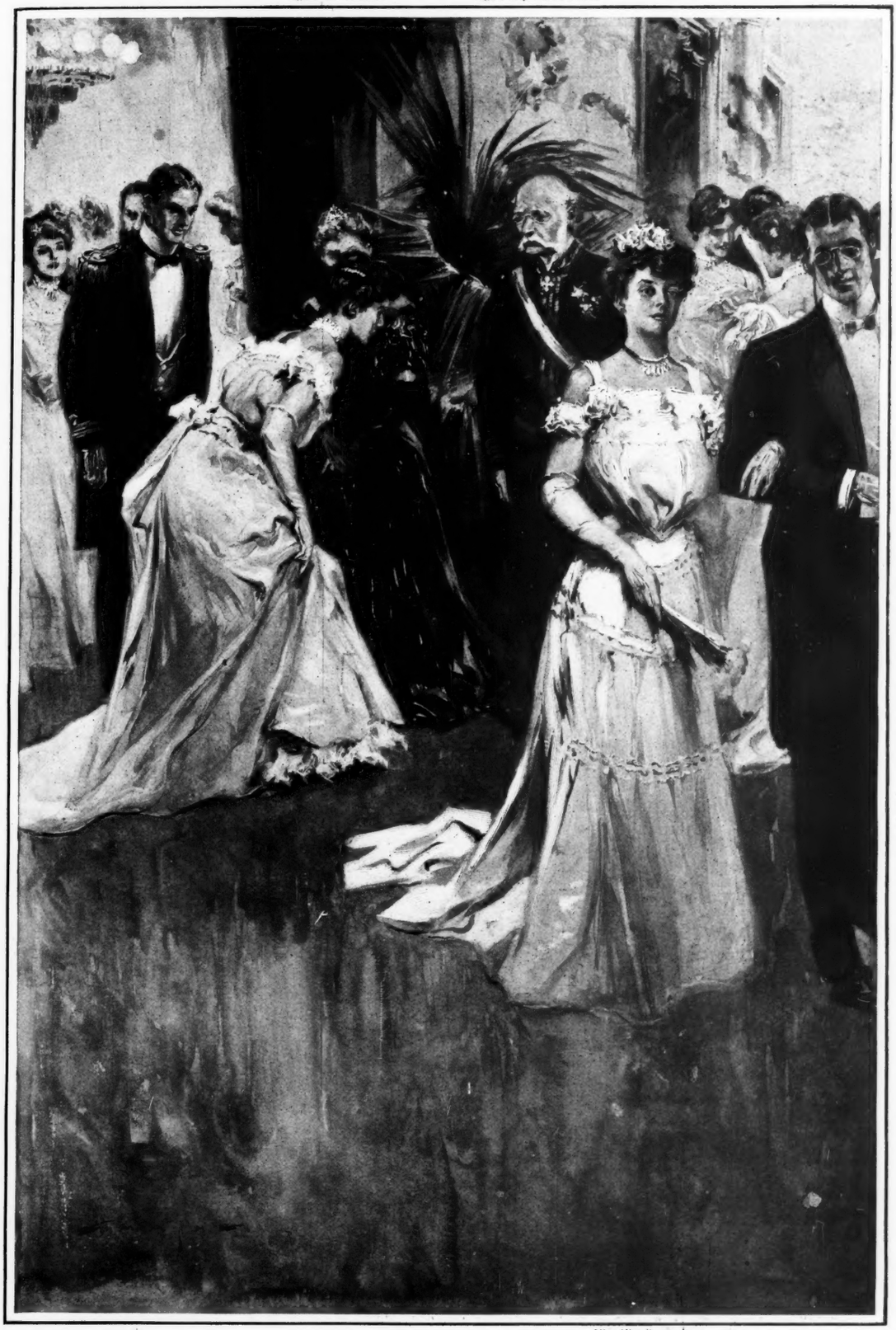
"The Sacred Hecatomb."—By Amanda Brewster Sewell
Thomas B. Clark Prize

THE exhibition of the National Academy, now being held in the galleries of the Fine Arts building in Fifty-seventh Street, has one interest that attaches in equal degree to no other of New York's annual picture shows. It sums up the achievements of the younger painters better than any other, for the Academy is true to its tradition of teaching and encouraging. To this end most of its prizes are awarded. The three Hallgarten prizes offered to painters under thirty-five years of age are given this year, in order of merit, to H. M. Walcott, William Fair Kline, and Miss Belle Haven. Of these, Mr. Kline is a member of the Academy. The Inness gold medal for the best landscape, never awarded twice to the same painter, goes to Leonard Ochtman, A.N.A., the previous winners being, in 1900, Bruce Crane, and, in 1901, Walter Clark. To Amanda Brewster Sewell is awarded the Thomas B. Clark prize for the best figure composition. It is gratifying news that Mr. Clark has assured this prize for all time by the gift of six thousand dollars to the Academy. Mrs. Sewell's picture, "The Sacred Hecatomb," shows a procession of Greek youths and maidens leading cattle to the sacrifice with music and the dance. These joyous figures, moving in a leafy glade into which the sunlight filters, are charming in color and rhythmic movement, and as a piece of admirably conceived and executed decorative painting it stands alone in the collection. The only painting worthy of comparison with it is Louis Loeb's "The Joyous Life," a group of classic female figures dancing across a sloping field in the glow of late afternoon while Pan pipes beneath a tree.

Mr. Walcott's "At the Party," which received the first Hallgarten prize, shows groups of happy children seated on a lawn, and is brilliant with color and animation. In showing the advance in the productions of the younger painters the exhibition is one of the most successful ever held.

"At the Party."—By H. M. Walcott
First Hallgarten Prize

Signora des Planches Signor Mayor des Planches



Miss Alice Roosevelt

THE FIRST DEBUTANTE'S DANCE OF THE SEASON IN WASHINGTON

The Italian Ambassador and Signora des Planches gave the first reception and dance of the season at the Italian Embassy in honor of Miss Roosevelt. Most of the debutantes of the diplomatic corps were present

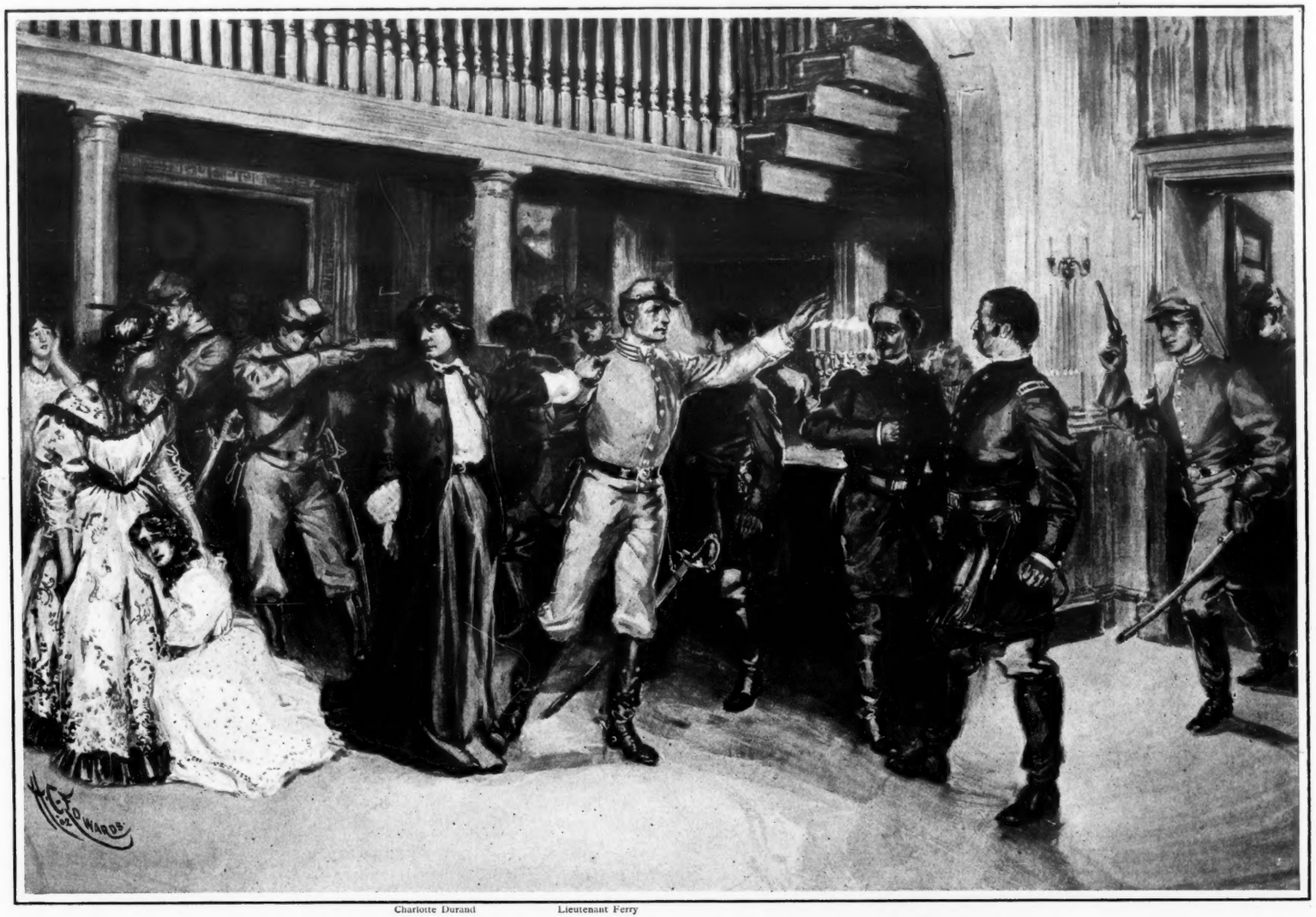
Recent Light on the Röntgen Rays

EVER since the extraordinary discovery by Professor Röntgen, seven years ago, the identity of the remarkable rays that bear his name has been a matter of scientific debate, of persistent experiment, and unabated wonder. Their character, penetrating unchanged the most opaque substances and bringing the invisible to ready view, was certainly sensational enough to provoke unlimited discussion, but until recently it has borne little fruit. When rays can pass squarely through the human body and record the shadows of its inner structure upon a photographic plate, it is evident enough that in some way or other energy has been transmitted through that body in amount sufficient to produce the photographic image, and the fundamental question has been the mechanism of the transmission. Now, energy can be carried in two well-known ways — by the passage of material particles from one point to the other, as in the stream from the nozzle of a sand-blast, or by the simple transmission of impulses in the medium between the two points, of which the most familiar instance is in the radiation of heat and light by waves in the ether. And it is often rather difficult to tell which process is in action, so that when the Röntgen rays came up for investigation their nature was a puzzle. They did not behave like ordinary light or any other known form of radiant energy, for not only did they freely penetrate substances which by good rights should have been opaque, but they utterly refused to be reflected by a mirror, bent in passing through a prism or lens, or twisted around a corner by diffraction. On the other hand, their properties were equally irreconcilable with those of any known form of streaming particles, so that hypothesis had a fair field for uncontrolled liberty.

The Automobile in Surgery

New York surgeons, hampered in the use of the X-rays in private houses, where there is no electric power, have recently devised the scheme of obtaining their power from the storage batteries of their automobiles. The wires are carried direct from the automobile in the street to the patient's room

Within a few months, however, M. Bloudlot has performed some beautiful experiments that may be regarded as crucial in discriminating between the two main suppositions just noted. By a very ingenious and refined method he has shown that the Röntgen rays are propagated with the same velocity as light. For good dynamical reason this leads to the conclusion that they are not streams of matter, but ether impulses akin to light. This being definitely shown, their differences from light admit of a fairly simple explanation following a suggestion made by Sir George Stokes. According to this view, the Röntgen rays are volleys of independent impulses in the ether, — mere fragmentary bits of light waves, never settling down into steady wave motion. When a ray of any kind strikes a body it tends to stir the molecules into vibration, and thereby to slow down the entering wave. But this takes time, albeit a very short time, so that while an ordinary light ray almost immediately settles into steadiness, the enormously sharp and brief impulses of the Röntgen ray, too short to fit the vibration time of the molecules, have come and gone, without losing much energy. Hence all bodies are transparent to such rays, at least to such degree that the impulses either get through or get far enough within the surface to escape reflection from it. And the same almost infinite suddenness of the impulse forbids the existence of diffraction, unless in very insignificant degree. The wonder is that even the sensitive molecules of the photographic plate or the fluorescent screen are stirred into action, and they probably would not be save for the relatively large energy of such terrifically sharp impulses. Wave length, in the ordinary sense of the word, they have not, any more than a pistol-shot has a musical pitch, but if they could be examined in detail, there is reason to expect that one would find the impulses of very varied length, but all so brief as to correspond in time of action with waves shorter than any known to us in the form of light. Professor J. J. Thomson has shown mathematically that just such swift disjointed impulses must be generated under the conditions which are found to determine the generation of Röntgen rays, so that theory and experiment seem at last to unite on a reasonable explanation that accounts for the very singular facts.



Charlotte Durand Lieutenant Ferry

MISS JULIA MARLOWE IN "THE CAVALIER"

Act III.—"Don't make a move! You're outnumbered three to one"

Charlotte Durand (Miss Marlowe) succeeds in calling Lieutenant Ferry (Mr. Lewers) to her rescue, which results in the recapture of a Confederate pay-train which had been sold to the Union troops by the spy, her husband, Captain Oliver (Mr. Worthing)

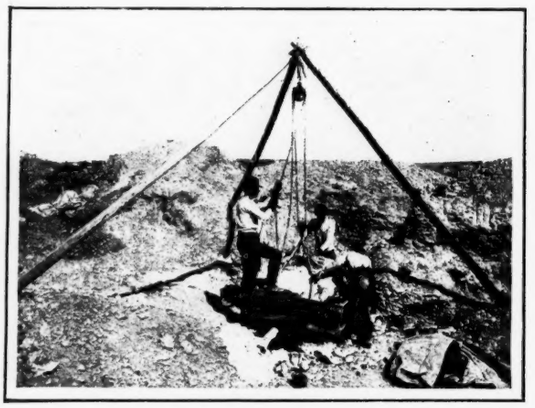
Excavating Prehistoric Animals of North America

THE explorations of the Department of Vertebrate Paleontology of the American Museum under Professor Henry Fairfield Osborn, for the season of 1902, were among the most successful known.

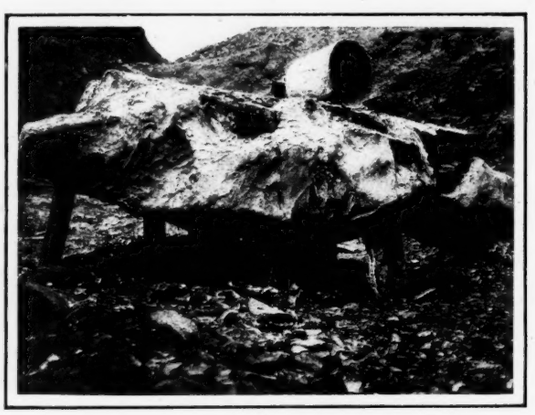
One expedition went into the region north of Miles City, Montana, seeking for the remains of horned dinosaurs (terrible lizards), under the direction chiefly of Barnum Brown, associated with Professor R. S. Lull, of Amherst College, and Mr. Brooks, a recent graduate of Amherst. They discovered a skull which lacked the upper portions of the horns only, and which had an especially complete frill. Other discoveries were portions of the skeleton of the same species and of other horned dinosaurs, the remains of a carnivorous dinosaur of gigantic size, three crocodile skeletons, and portions of the skeletons of several beaked lizards (*Rhynchocephalians.*)

Another expedition in Montana, under the leadership of Dr. W. D. Matthew, was in quest of mammals chiefly of the Miocene period. Discoveries were made of the beds containing the remains of some of the smaller animals of the period when the Titanotheres flourished, especially small carnivores and rodents and some primitive species of horse, among them *Mesohippus westoni.* The small fauna of the Lower Oligocene had already been made known partly through the researches of Earl Douglas, but these collections greatly add to his results. The party found the lower jaws and extensive portions of the legs and skeleton of a large rhinoceros, probably belonging to the species *R. malacorhinus* Cope, a long-limbed animal which has been known hitherto from its skull and from a single foot-bone only. This find enables Professor Osborn to give almost the complete characters of this long-limbed and long-skulled type, which stands in marked contrast to the more abundant short-limbed and short-skulled rhinoceros of the same period, named *Telecoceras.*

An expedition, under the leadership of Walter Granger, associated with Peter Kaison, returned to the vicinity of the famous Bone Cabin dinosaur quarry of central Wyoming for the fourth year of excavation. The early part of the season was devoted to a new dinosaur quarry discovered by W. H. Reed, and systematically explored by the museum for the first time in 1901. This quarry proved to be very rich, especially in remains of the giant herbivorous dinosaur named *Camarasaurus supremus* by Cope and *Brontosaurus* by Marsh. After work was finished at this point, the Bone Cabin quarry was systematically explored, and yielded a rich harvest of fifty-two boxes, mostly fine specimens, and several of them new to the museum collection.



Method of Work in Raising and Boxing frail Bones and Skeletons



Section of a gigantic extinct Dinosaur encased in Plaster, and ready for Shipment to New York

Professor Osborn's Party unearthing Bones at Bone Cabin Quarry, Wyoming

The search for fossil horses was continued under the direction of J. W. Gidley, especially in the southern portion of South Dakota. A brilliant discovery was made of the remains of a small herd of fossil three-toed horses belonging apparently to the genus *Hipparion,* and parts of numerous fore and hind limbs in a perfect state of preservation, and one skull and an associated skeleton so complete that it may be mounted. This discovery more than added another much-desired stage to the collection presented to the museum through the generosity of William C. Whitney, who donated $15,000 to acquire a collection of fossil horses.

After months of most difficult and skilful work, chiefly under the direction of Adam Hermann, three specimens of rare interest have been made ready for exhibition at the museum. One of these is the complete skeleton of a small new dinosaur which is to be named "The Bird Catcher," owing to its apparent capacity for great speed and the long and slender grasping structure of the hands. A second specimen is the great bear-headed fish *Portheus molossus,* secured by Charles H. Sternberg in Kansas. This magnificent specimen, sixteen feet in length, has been mounted on a very large panel, and it may be fairly claimed that it is the most striking specimen of a fossil fish in any museum in the world. The other exhibit is the superb pair of tusks and skull of the mammoth, the great *Elephas imperator,* secured from Texas. The tusks are thirteen feet six inches in length and twenty-two inches in circumference. The entire upper portion of the skull has been restored in white plaster. The specimen has been mounted with a view to showing the actual height of the skull in an animal of this size.

The fossil horses, so called, comprise the skeletons of the ancestors of the modern horse, which, when completed, will form a unique collection at the American Museum. The work of the American Museum under the direction of Professor Osborn and his associates is of the highest scientific importance.

Results of the recently returned Expedition sent out by the American Museum of Natural History under Professor Henry Fairfield Osborn

ELEONORA DUSE AND LENBACH'S CHILD

From the painting by Lenbach

THE TWENTIETH-CENTURY PROB

New York, as the largest of American, and soon to be the largest of world cities, is at this moment in the throes of a great
enough streets to carry them all. The first step was to carry people overhead, and the elevated ro
be opened in two years. This drawing shows what the three tiers o

Tunnels. ..... Tunnels proposed. Tunnel Stations. Penna. Railroad Terminals. N. Y. C. and H. R. Railroad, and N. Y.
Elevated Railroad Stations. D. L. and W. Railroad Terminals. Erie Railroad Terminals. West Sh
1—Brooklyn Bridge. 2—Manhattan Bridge. 3—Williamsburg Bridge (building). 4—Blac

PROBLEM OF MUNICIPALITIES

s of a great problem. More than a million and a half people want to get up and down town each day, and there are not
e elevated road was built. That is now insufficient, and next comes the underground, which will
hree tiers of transporting machinery will be able to do in the future

road, and N. Y., N. H., and H. Terminals. ⋇ N. Y. and N. J. Tunnel Terminal. •••• Surface Steam Roads. —•—• Elevated Railroads.
⊕ West Shore and N. Y., O. and W. Terminals. ∩ N. J. Central, Phila. and Read., and B. and O. Terminals.
ing). 4—Blackwells Island Bridge (building). 5—Penna. Railroad Connecting Bridge